



Receipt  
2800  
PATENT  
450100-2780.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tetsujiro KONDG  
Serial No. : 09/075,666  
Filed : May 11, 1998  
For : DIGITAL DATA CONVERSION EQUIPMENT AND A METHOD  
FOR THE SAME  
Art Unit : 2858

745 Fifth Avenue  
New York, New York 10151  
Tel. (212) 588-0800

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as  
first class mail in an envelope addressed to:  
Assistant Commissioner for Patents  
Washington, D.C. 20231, on November 9, 1998

*Gordon Kessler #38,571*  
for: William S. Frommer, Reg. No. 25,506

Name of Applicant, Assignee or  
Registered Representative

*Gordon Kessler*  
Signature

November 9, 1998  
Date of Signature

RECEIVED  
SEP 27 1999  
TECH CENTER 2700

SECOND REQUEST FOR CORRECTED FILING RECEIPT

Application Processing Division's  
Customer Correction Branch  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

This is a Request to correct the Filing Receipt issued in  
the above-identified application, the first such request having  
been filed on July 29, 1998. The "CORRECTED" Filing Receipt did  
not incorporate the requested corrections.

*corrections  
were made  
as of 2/3/00  
JC*

J:\SONY\2780.1\FILREC.INC (WSF\1k)

1

TECHNOLOGY CENTER 2800

98 NOV 18 PM 9:29

RECEIVED

This is a re-issue application of Patent No. 5,517,588;  
hence the Filing Receipt of this application should conform to  
the data on the signed declaration and the patent.

UNDER APPLICANTS:

After Kondo please change --"TOKYO, JAPAN"-- to --KANAGAWA,  
JAPAN--;

UNDER FOREIGN APPLICATIONS-

Please change "155719" to --4-155719--.

A copy of the Filing Receipt with the requested  
correction(s) noted thereon in red ink and a copy of the first  
page of the patent that issued are enclosed.

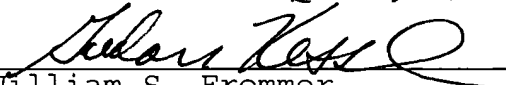
The issuance of a corrected Filing Receipt is respectfully  
requested.

Please charge any fees required for this correction or  
credit any overpayment to Deposit Account No. 50-0320.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP  
Attorneys for Applicant

GORDON KESSLER #38,571

By:   
For: William S. Frommer  
Reg. No. 25,506  
Tel. (212) 588-0800

RECEIVED  
SEP 27 1999  
TECH CENTER 2700

FILING RECEIPT

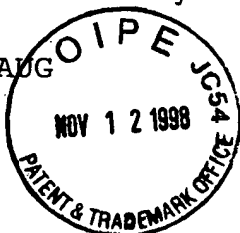
CORRECTED



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
09/075,666	05/11/98	2858	\$1,760.00	450100-2780.	7	38	12

WILLIAM S FROMMER  
FROMMER LAWRENCE AND HAUG  
745 FIFTH AVENUE  
NEW YORK NY 10151



Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

**Applicant(s)**

TETSUJIRO KONDO, TOKYO, JAPAN.

CONTINUING DATA AS CLAIMED BY APPLICANT-

THIS APPLN IS A RE OF 08/061,730 05/17/93 PAT 5,517,588

FOREIGN APPLICATIONS-

JAPAN

4-155719

05/22/92

**TITLE**

DIGITAL DATA CONVERSION EQUIPMENT AND A METHOD FOR THE SAME

PRELIMINARY CLASS: 382

RECEIVED  
SEP 27 1999  
TECH CENTER 2700

FROMMER LAWRENCE  
& HAUG, LLP  
OCT 31 P 10:12



US0055175

**United States Patent** [19][11] **Patent Number:** **5,517,588****Kondo**[45] **Date of Patent:** **May 14, 1996****[54] DIGITAL DATA CONVERSION EQUIPMENT  
AND A METHOD FOR THE SAME****[75] Inventor:** Tetsujiro Kondo, Kanagawa, Japan**[73] Assignee:** Sony Corporation, Tokyo, Japan**[21] Appl. No.:** 61,730**[22] Filed:** May 17, 1993**[30] Foreign Application Priority Data**

May 22, 1992 [JP] Japan ..... 4-155719

**[51] Int. Cl.<sup>6</sup>** ..... **H04N 7/01****[52] U.S. Cl.** ..... **382/300; 348/445****[58] Field of Search** ..... 382/41, 47, 54,  
382/254, 276, 299, 300; 358/140, 160,  
180, 428; 348/443, 445, 454, 426, 448,  
452; 345/136; 364/723**[56] References Cited****U.S. PATENT DOCUMENTS**

4,578,812	3/1986	Yui	382/47
4,587,556	5/1986	Collins	348/443
4,630,307	12/1986	Cok	382/54
4,789,933	12/1988	Chen et al.	382/54
4,831,435	5/1989	Song et al.	358/140
5,019,903	5/1991	Dougall et al.	358/140
5,048,102	9/1991	Tararine et al.	382/41
5,054,100	10/1991	Tai	382/47
5,125,042	6/1992	Kerr et al.	358/428
5,161,014	11/1992	Pearson et al.	348/443
5,229,868	7/1993	Kanno et al.	358/462
5,355,178	10/1994	Parolski	348/452

**FOREIGN PATENT DOCUMENTS**

0477822	4/1992	European Pat. Off.	
63-48088	2/1988	Japan	H04N 7/13
63-38381	2/1988	Japan	H04N 7/13
WO92/03800	3/1992	WIPO	

**OTHER PUBLICATIONS**

Gonzalez et al. "Digital Image Processing", 1992, Addison Wesley, pp. 300-302.

BBC Research Department Report, No. 9, Jul. 1988, Tadworth GB pp. 1-13 Knee et al., 'bandwidth compression for HDTV broadcasting: investigation of some adaptive subsampling strategies'.

ICASSP '86 Tokyo, 7-11 Apr. 1986, IEEE New York US pp. 145-148, Maresscq et al. 'Vector Quantization In Transformed Image Coding' paragraphs "Introduction" and Classification.

ICASSP '88 New York, 11-14 Apr. 1988, vol. 2, IEEE, New York, US, pp. 788-791 Breeuwer 'Transform Coding Of Images Using Directionally Adaptive Vector Quantization' paragraph 1— paragraph 2.1.

**Primary Examiner**—Joseph Mancuso**Assistant Examiner**—Larry J. Prikockis**Attorney, Agent, or Firm**—William S. Frommer; Alvin Sinderbrand**[57] ABSTRACT**

In digital data conversion apparatus and method, class data are generated in association with reference interpolated data for each of a plurality of classes on the basis of a reference high definition digital video signal which includes a reference standard definition digital video signal in addition to the reference interpolated data. The class data is stored at respective addresses in a memory. A standard definition digital video signal representing pixel values is received and then clustered so as to produce a class corresponding to the pixel values of the standard definition digital video signal. The class data is retrieved from the memory address which corresponds to the class of the standard definition digital video signal, and interpolated data is generated in accordance with the standard definition digital video signal and the retrieved class data with such interpolated data constituting a high definition digital video signal.

**14 Claims, 7 Drawing Sheets**